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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,805	01/07/2004	Nubar Ozbalik	EP-7621	5115
34769	7590	08/08/2006	EXAMINER	
NEW MARKET SERVICES CORPORATION (FORMERLY ETHYL CORPORATION) 330 SOUTH 4TH STREET RICHMOND, VA 23219			LANG, AMY T	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/752,805

Applicant(s)

OZBALIK ET AL.

Examiner

Amy T. Lang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☒ Claim(s) 4, 11, 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/03/2006</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 4, 11, and 16 are objected to because of the following informalities: claims 4 and 11 include the phrase "is comprises one or more," which is incorrect in context. Appropriate correction is required.
2. Claim 16 is objected to because of the following informalities: it is the examiner's position that it is unclear what is in the first Markush group of claim 16. In one respect only the transmission is in the Markush group, which is then an incorrect Markush group. In another respect, the transmission, starting clutch, and one or more shifting clutches are in the Markush group. However, it is unclear where the Markush ends. Appropriate correction is required.
3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).
Misnumbered claims 50 and 51 have been renumbered 49 and 50 respectively.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 8-10, 15-17, 21-24, 26, 28-30, and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by L'Heureux (US 6,300,290 B1).

L'Heureux discloses a lubricating oil composition comprised of base oil and a polyisobutylene viscosity index improver (column 1, lines 28-46). The base oil is further disclosed as natural or synthetic oils, or mixtures, such as mineral oils or an ester (column 3, lines 1-9, 54-57). The base oil is present in the composition from 20 to 70 wt%, which clearly overlaps the instantly claimed range of 5 to 20 wt% (column 1, lines 45-46).

The polyisobutylene viscosity index improver is disclosed with an average molecular weight from 300 to 1500, with 950 being the preferred amount, measured by gel permeation chromatography (column 1, lines 54-67). These viscosity index improvers are present in the lubricating composition from 3 to 50 wt% (column 1, lines 37-40).

L'Heureux discloses the lubricating composition with a kinematic viscosity of 6.5 to 14 cSt at 100 degrees Celsius and a Brookfield viscosity of less than 17,000 cP at –40 degrees Celsius (column 1, lines 32-36; column 2, lines 63-67).

Other additives are included in the lubricating composition including corrosion inhibitors, friction modifiers, antifoaming agents, dispersants, and antiwear agents (column 4, lines 17-22). These additives are present in the lubricating composition from 1 to 25 wt% (column 4, lines 12-16). The antifoam additive is further disclosed as a silicone based component (column 4, lines 62-63). L'Heureux also discloses a second viscosity index improver, which inherently functions as a thickening agent, as polymethacrytes. These additives are present in the composition from 0.02 to 0.5wt% (column 2, lines 29-40).

However, L'Heureux does not specifically disclose (i) the friction versus velocity curve for the disclosed lubricating oil and (ii) that the lubricating oil is suitable for use in a continuously variable transmission or transmission employing the instantly claimed torque converters. With respect to (i), since L'Heuteux discloses the same composition as is instantly claimed and the addition of a polyisobutylene viscosity index improver, the lubricating composition would also inherently display a more positive slope on a friction vs. velocity plot with the polyisobutylene. With respect to (ii), since the lubricating composition disclosed by L'Heuteux clearly overlaps the instantly claimed composition, it would also inherently be suitable for use in a continuously variable transmission or transmission employing the instantly claimed torque converters.

Therefore, L'Heuteux '290 anticipates the cited present claims.

6. Claims 1-17, and 21-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Balasubramaniam (US 6,444,622 B1) in view of the evidence given by Performance Filtration Inc, Mark Barnes, and Science and Engineering Encyclopedia.

Balasubramaniam discloses a lubricating composition comprised of base oil and a polyisobutylene viscosity index improver (column 2, lines 50-53; column 11, lines 20-25). The base oil is further disclosed as natural lubricating oils, synthetic lubricating oils, and mixtures, including mineral oils, vegetable oils, and ester (column 2, line 65 through column 3, line 1; column 3, lines 10-13, column 4, lines 54-55).

Balasubramaniam discloses the base oil with a kinematic viscosity from 2 to 8 cSt at 100 degrees Celsius (column 3, lines 4-9).

The polyisobutylene viscosity index improver is disclosed with an average molecular weight from 800 to 5000 as measured by gel permeation chromatography (column 11, lines 8-38). One example specifically discloses the use of the viscosity index improver as 20 wt%, which clearly overlaps the instantly claimed range (column 16, lines 6-7). Additionally Balasubramaniam teaches the polyisobutylenes as hydrogenated to increase their stability (column 11, lines 54-57).

Other additives are included in the lubricating composition including ashless dispersants, friction modifiers, antioxidants, antiwear agents, defoamers, and corrosion inhibitors (column 7, lines 10-16). The dispersant is further disclosed as alkenyl succinimides, Mannich bases, and alkenyl succinic acid esters (column 6, lines 19-25). The friction modifier is further disclosed as an alkoxylated fatty amine or ether amine (column 14, lines 8-27). The disclosed antioxidant comprises sterically hindered

phenols (column 9, lines 18-33). The antiwear agent is disclosed as a salt of a phosphate ester (column 10, lines 32-38). The defoamers comprise silicones and polyacrylates (column 8, lines 30-33). These additives are present from 2 to 25 wt% of the lubricating composition (column 7, lines 23-25). Additionally, Balasubramaniam discloses another viscosity index improver, which inherently functions as a thickening agent, as an olefin copolymer or a polymethacrylate (column 11, lines 8-11).

However, Balasubramaniam does not specifically disclose (i) the friction versus velocity curve for the disclosed lubricating oil, (ii) that the lubricating oil is suitable for use in a continuously variable transmission or transmission employing the instantly claimed torque converters, and the kinematic and Brookfield viscosity of the lubricating composition.

With respect to (i), since Balasubramaniam discloses the same composition as is instantly claimed and the addition of a polyisobutylene viscosity index improver, the lubricating composition would also inherently display a more positive slope on a friction vs. velocity plot with the polyisobutylene.

With respect to (ii), since the lubricating composition disclosed by Balasubramaniam clearly overlaps the instantly claimed composition, it would also inherently be suitable for use in a continuously variable transmission or transmission employing the instantly claimed torque converters.

With respect to (iii), Balasubramaniam discloses the lubricating oil composition with a velocity classification of ISO 32 according to AGMA 9005-D94 (column 15, lines 11-14). This velocity classification determines the velocity range for a lubricant and the

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MSDS Data Sheet for an ISO 32 grade lubricant is disclosed with a viscosity of 5.8 cSt at 100 degrees Celsius (Performance Filtration Inc). Therefore, in view of the evidence given by the MSDS Data Sheet, the lubricant disclosed by Balasubramaniam would also be within the range of 5.8 cSt. Furthermore, the website Practicing Oil Analysis by Mark Barnes provides evidence that Brookfield velocity is the same as dynamic velocity (page 1, line 7; page 3, lines 9-13). Dynamic velocity and kinematic velocity are related by density, as given by the evidence of Science and Engineering Encyclopedia (page 1). Therefore, since the lubricant disclosed by Balasubramaniam overlaps the instantly claimed kinematic velocity, it would also overlap the instant Brookfield velocity, since they are related by density.

Therefore, Balasubramaniam '622 anticipates the cited present claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 38, 39, 41, 42, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Rossi (US 6,468,948).

L'Heureux, as discussed in paragraph 5 is incorporated here by reference, discloses a lubricating oil composition comprised of base oil and a polyisobutylene viscosity index improver. The lubricating oil is added to a fuel in an amount of 5 wt% (20 parts by weight of fuel to 1 part by weight of lubricating oil) (column 6, lines 56-60).

L'Heureux does not specifically disclose the lubricating oil for use as a power transmission fluid.

Rossi discloses that fuel compositions can be utilized as power transmission fluids (column 1, lines 30-43). Therefore, it would have been obvious to also utilize the fuel composition disclosed by L'Heureux as a power transmission fluid.

10. Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Wu (US 4,912,272).

L'Heureux, as discussed in paragraph 5 is incorporated here by reference, discloses a lubricating oil composition comprised of base oil and a polyisobutylene viscosity index improver.

L'Heureux does not disclose the polyisobutylenes as hydrogenated.

Wu discloses a lubricating composition exhibiting superior lubricant properties including a high viscosity index (column 1, lines 5-7). This property is due to the addition of hydrogenated polyisobutylene viscosity index improvers in the lubricating

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composition (claim 1, column 11). Since L'Heureux also discloses polyisobutylene viscosity index improvers in a lubricating composition, it would have been obvious to also hydrogenate the polyisobutylene and therefore improve the lubricating properties of the composition.

11. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Rossi (US 6,468,948) and Wu (US 4,912,272).

L'Heureux and Rossi, as discussed in paragraph 9 are incorporated here by reference, disclose a lubricating oil composition comprised of base oil and a polyisobutylene viscosity index improver.

L'Heureux does not disclose the polyisobutylenes as hydrogenated.

Wu discloses a lubricating composition exhibiting superior lubricant properties including a high viscosity index (column 1, lines 5-7). This property is due to the addition of hydrogenated polyisobutylene viscosity index improvers in the lubricating composition (claim 1, column 11). Since L'Heureux also discloses polyisobutylene viscosity index improvers in a lubricating composition, it would have been obvious to also hydrogenate the polyisobutylene and therefore improve the lubricating properties of the composition.

12. Claims 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Rossi (US 6,468,948) and Balasubramaniam (US 6,444,622 B1).

L'Heureux and Rossi, as discussed in paragraph 9 are incorporated here by reference, discloses a lubricating oil composition comprised of base oil, a polyisobutylene viscosity index improver, and additives. This lubricant is utilized in engines when mixed with fuels (column 6, lines 35-37). The additives disclosed by L'Heureux include corrosion inhibitors, friction modifiers, antifoaming agents, dispersants, and antiwear agents.

L'Heureux does not specifically disclose the additives that are instantly claimed.

Balasubramaniam, as discussed in paragraph 6 is incorporated here by reference, also discloses a lubricating oil composition comprised of base oil, a polyisobutylene viscosity index improver, and additives. This lubricant is also utilized in the automotive industry (column 1, lines 13-15). Balasubramaniam discloses specific additives including alkenyl succinimides, Mannich bases, and alkenyl succinic acid ester dispersants, alkoxylated fatty amine or ether amine friction modifiers, sterically hindered phenol antioxidants, a salt of a phosphate ester antiwear agent, and silicone and polyacrylate defoamers. Given that this lubricant, with the disclosed additives, exhibits improved performance properties, it would have been obvious for L'Heureux to also include these specific additives in the lubricating composition since both inventions pertain to the automotive industry.

13. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Sumiejski (US 6,103,673).

L'Heureux, as discussed in paragraph 5 is incorporated here by reference, discloses a lubricating oil composition comprised of base oil, and a polyisobutylene viscosity index improver

L'Heureux does not specifically disclose the use of the lubricant composition in an automatic transmission or constantly variable transmission.

Sumiejski discloses that it is known in the art for two-cycle lubricants to also be utilized in automatic and constantly variable transmissions (column 19, line 56 through column 20, line 5). It therefore would have been obvious to utilize the lubricant disclosed by L'Heureux in an automatic transmission or an automatic transmission comprising a constantly variable transmission.

14. Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Rossi (US 6,468,948) and Sumiejski (US 6,103,673).

L'Heureux and Rossi, as discussed in paragraph 9 are incorporated here by reference, disclose a lubricating oil composition comprised of base oil, and a polyisobutylene viscosity index improver. This lubricant is utilized in two-cycle engines in an amount of 5 wt% (20 parts by weight of fuel to 1 part by weight of lubricating oil) (column 1, lines 1-14; column 6, lines 56-60).

The combination of L'Heureux and Rossi does not specifically disclose the use of the lubricant composition in an automatic transmission or constantly variable transmission.

Sumiejski discloses that it is known in the art for two-cycle lubricants to also be utilized in automatic and constantly variable transmissions (column 19, line 56 through column 20, line 5). It therefore would have been obvious to utilize the lubricant disclosed by L'Heureux in an automatic transmission or an automatic transmission comprising a constantly variable transmission in an amount of 5 wt%.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Sumiejski (US 6,103,673) and Landa (US 2002/0130010 A1).

L'Heureux and Sumiejski, as discussed in paragraph 14 are incorporated here by reference, disclose a lubricating oil composition comprised of base oil, and a polyisobutylene viscosity index improver utilized in automatic transmissions.

The combination of L'Heureux and Sumiejski do not disclose the automatic transmission with a carbon fiber friction plate.

Landa discloses that it is known in the art for automatic transmissions to contain friction plates of carbon fiber ([0001], [0017]). Therefore, it would have been obvious for the lubricating composition disclosed by L'Heureux to be utilized in automatic transmissions with a carbon fiber friction plate.

16. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over L'Heureux (US 6,300,290 B1) in view of Rossi (US 6,468,948), Sumiejski (US 6,103,673), and Landa (US 2002/0130010 A1).

L'Heureux, Rossi, and Sumiejski, as discussed in paragraph 11 are incorporated here by reference, disclose a lubricating oil composition comprised of base oil, and a polyisobutylene viscosity index improver utilized in automatic transmissions.

The combination of L'Heureux, Rossi, and Sumiejski do not disclose the automatic transmission with a carbon fiber friction plate.

Landa discloses that it is known in the art for automatic transmissions to contain friction plates of carbon fiber ([0001], [0017]). Therefore, it would have been obvious for the lubricating composition disclosed by L'Heureux to be utilized in automatic transmissions with a carbon fiber friction plate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy T. Lang whose telephone number is 571-272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/02/2006
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